

Spot Safety Project Evaluation

Project Information

Order ID: 41000028082

Project ID: 10-07-203

Location: NC 218 (Fairview Road) and SR 3106 (Brief Road) and SR 5240 (Allen Black Rd)

County: Mecklenburg

City: Mint Hill

Division: 10

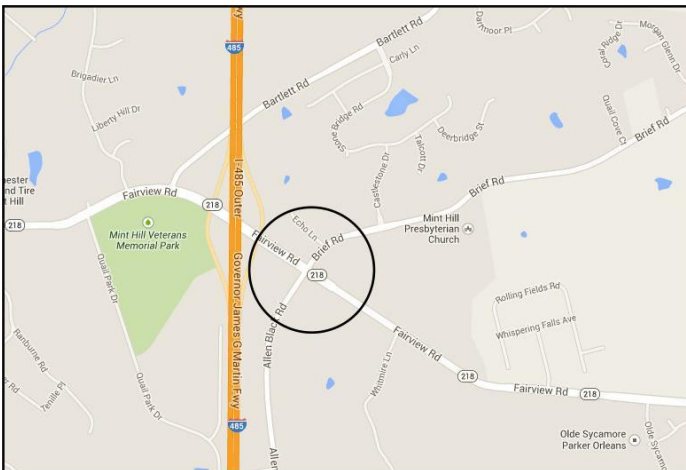
Signal ID: 10-1388

Countermeasure: Install fully actuated signal with interconnect to signal at I-485 interchange.

Project Completion: July 10, 2009

Project Cost: \$78,000

Map and Aerial (from Google Maps, Google Coordinates are -- 35.177018,-80.625958)



Naive Before and After Analysis

Before Period: September 1, 2004 through April 30, 2009 (4 years, 8 months)

Const. Period: May 1, 2009 through July 31, 2009

After Period: August 1, 2009 through March 31, 2014 (4 years, 8 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the NC 218 and SR 3106 and SR 5240 approaches.

Target Crashes: Frontal Impact Crashes. Please note that Frontal Impact Crashes were the target crashes for the applied countermeasure. Frontal Impact crashes include: Left turn, same roadway; Left turn, different roadways; Right turn, same roadway; Right turn, different roadways; Head on; and Angle.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	15	18	+ 20.0 %
Total Severity Index	3.96	8.09	+ 104.3 %
Target Crashes	9	8	- 11.1 %
Target Crash Severity Index	5.11	13.25	+ 159.3 %
Volume (2006, 2011)	14,800	16,500	- 11.5 %

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	0	0	N/A
Class A injury Crashes	0	1	+ 100.0 %
Class B injury Crashes	3	1	- 66.7 %
Class C Injury Crashes	3	6	+ 100.0 %
Property Damage Only	9	10	+ 11.1 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Angle (Target)	8	4	- 50.0 %
Right Turn, Different Roadway (Target)	1	2	+ 100.0 %
Left Turn, Same Roadway (Target)	0	2	+ 200.0 %
Southbound Rear End Crashes	2	2	0.0 %
Westbound Side Swipes	0	2	+ 200.0 %

Overall Summary Results

Total Crashes:	+ 20 %	(increase)
Total Crash Severity:	+ 104 %	(increase)
Target Crashes:	- 11 %	(reduction)
Target Crash Severity:	+ 159 %	(increase)
Volume:	+ 12 %	(increase)

Additional Summary Results

Angle (Target):	- 50 %	(reduction)
Left Turn, Same Roadway Crashes (Target):	+ 200 %	(increase)

Items for Discussion/Concerns

Within the intersection, angle crashes decreased from 8 crashes to 4 crashes in the after period. Left turn, same roadway crashes increased however, from 0 crashes to 2 crashes in the after period, with both LTSR crashes occurring on NC 218.

The intersection experienced an increase of overall crashes (15 to 18), but a decrease in target crashes (9 to 8) from the before period to the after period.

Data Prepared For

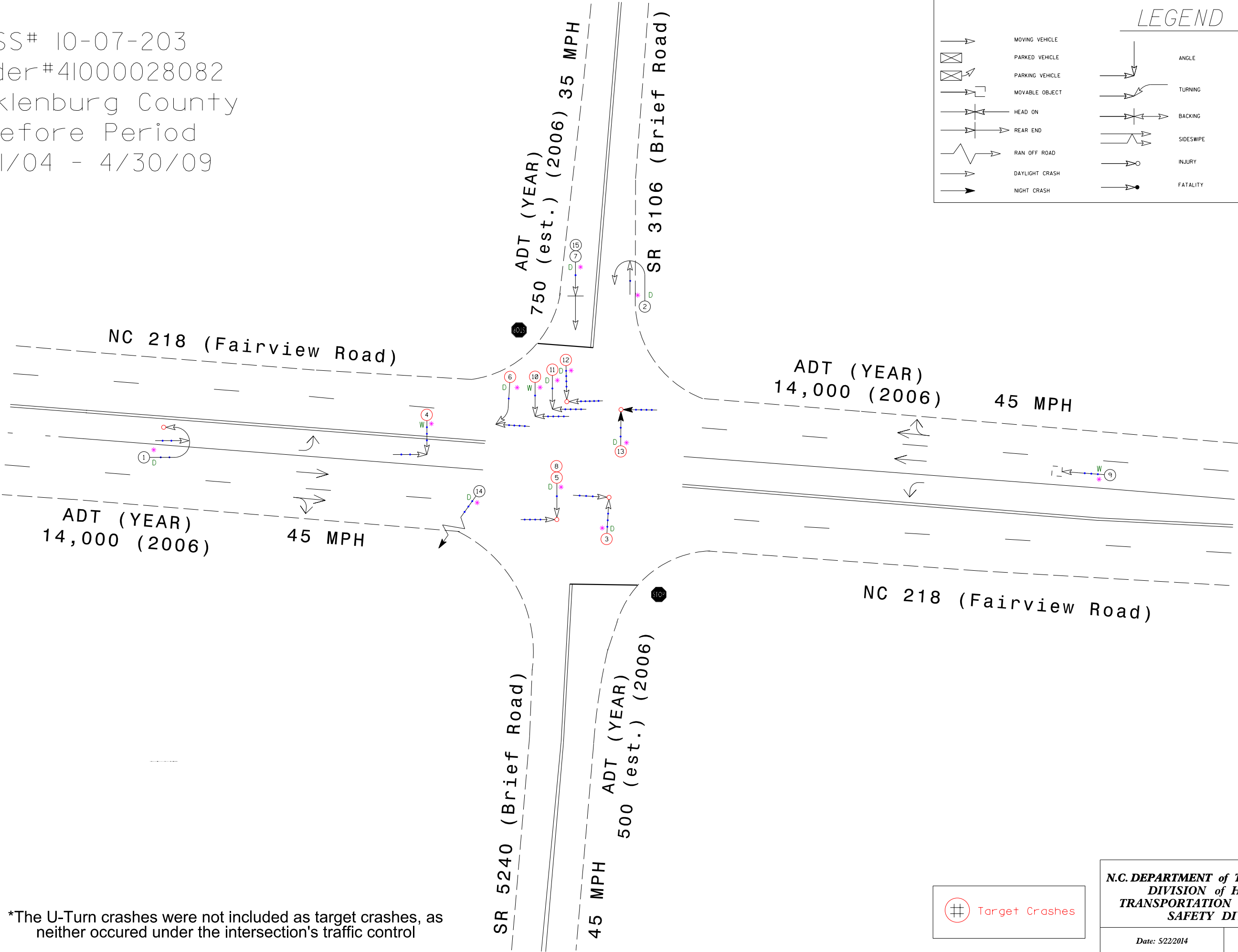
The Traffic Safety Unit *of the*
Transportation Mobility and Safety Division *of the*
Division of Highways *of the*
North Carolina Department of Transportation

Data Prepared By

Principal Investigator: Elizabeth Scott, EI
Work Group/Consultant: Stantec Consulting Services Inc.
Date: May 28, 2014

SS# 10-07-203
Order#41000028082
Mecklenburg County
Before Period
9/1/04 - 4/30/09

LEGEND			
	MOVING VEHICLE		ANGLE
	PARKED VEHICLE		TURNING
	PARKING VEHICLE		BACKING
	MOVABLE OBJECT		SIDESWIPE
	HEAD ON		INJURY
	REAR END		FATALITY
	RAN OFF ROAD		9 MPH OR LESS
	DAYLIGHT CRASH		10 MPH TO 19
	NIGHT CRASH		20 MPH TO 29
			30 MPH TO 39
			40 MPH TO 49
			50 MPH TO 59
			60 MPH TO 69
			70 AND UP
			SPEED UNKNOWN
			A ANIMAL
			P PEDESTRIAN
			B BICYCLE
			T TRAIN
			* DRIVER AT FAULT
			D DRY
			W WET
			I ICY OR SNOWY
			O Other



*The U-Turn crashes were not included as target crashes, as neither occurred under the intersection's traffic control



N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
TRANSPORTATION MOBILITY and
SAFETY DIVISION

Date: 5/22/2014

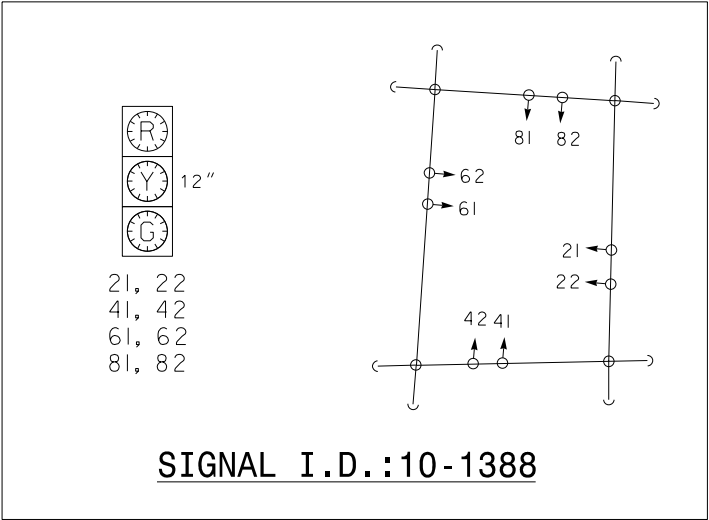
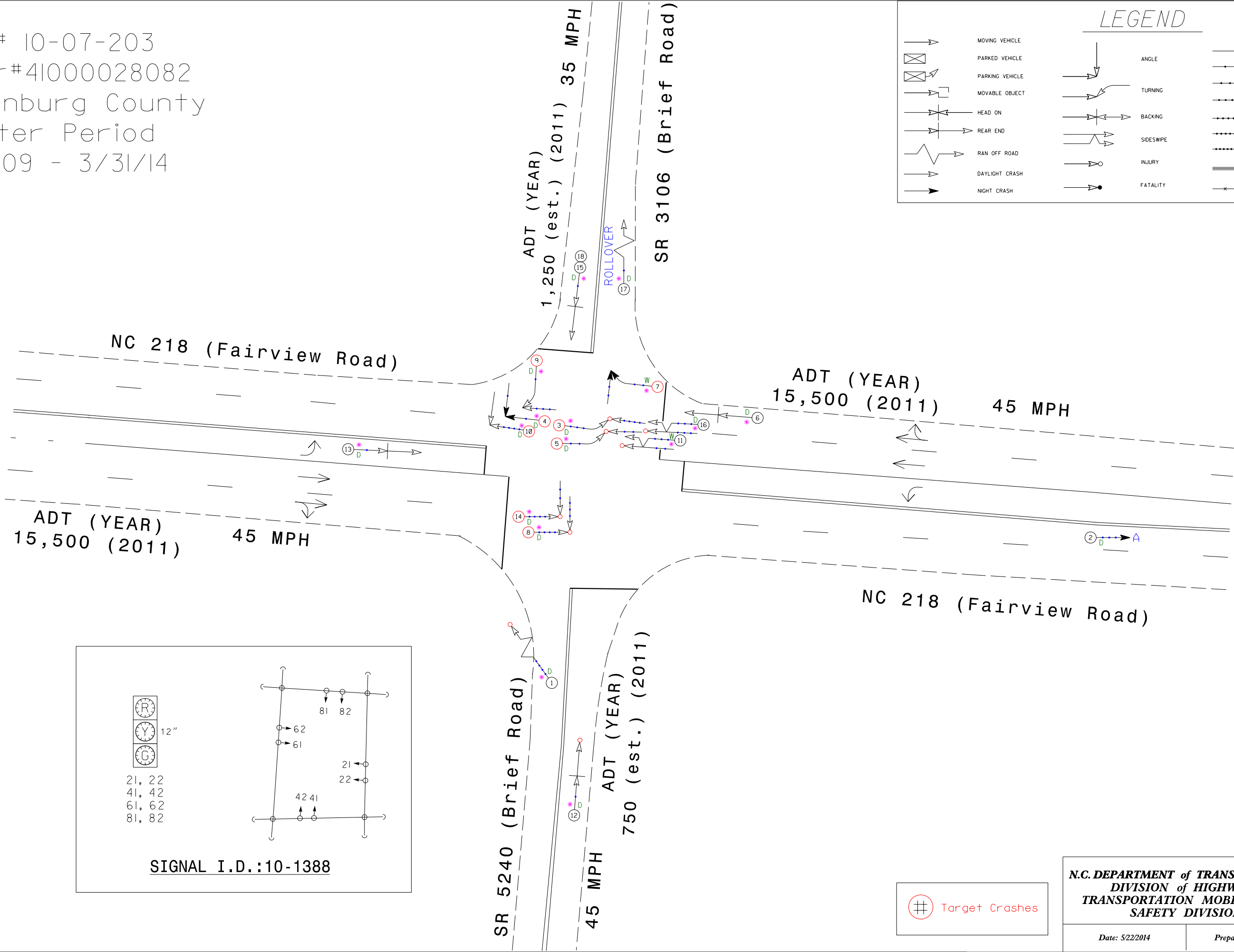
Prepared By: ESS



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SS# 10-07-203
Order#41000028082
Mecklenburg County
After Period
8/1/09 - 3/31/14

LEGEND			
	MOVING VEHICLE		ANGLE
	PARKED VEHICLE		TURNING
	PARKING VEHICLE		BACKING
	MOVABLE OBJECT		SIDESWIPE
	HEAD ON		INJURY
	REAR END		FATALITY
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Target Crashes

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